

WHAT IS CLAIMED IS:

1. A sensor device comprising:

a coated electric wire wound around a detection circuit in a planar manner for the purpose of electrostatic shield.

2. The sensor device according to claim 1, wherein the coated electric wire is spirally wound around the detection circuit in a single manner.

3. The sensor device according to claim 1 or 2, further comprising:

a detection circuit board having the detection circuit; and

a cylindrical case;

wherein the coated electric wire is wound around the detection circuit board in a cylindrical manner, and the direction of an axis of the cylindrical surface accords with the direction of the axis of the case.

4. The sensor device according to claim 1, wherein the sensor device is a proximity sensor device comprising a detection coil having a core; and

the detection circuit includes an oscillation circuit having the detection coil serving as a resonance element.

5. The sensor device according to claim 4, wherein a metallic film for electrostatically shielding the

detection coil is formed at the outer surface of the core, and the coated electric wire is electrically connected to the metallic film of the core.

6. The sensor device according to claim 5, further comprising:

a detection circuit board having the detection circuit;

wherein both ends of the coated electric wire are electrically connected to the metallic film of the core, and are electrically connected to a ground pattern of the detection circuit board at the intermediate portion of the coated electric wire.

7. The sensor device according to claim 4, wherein the coating strength of the coated electric wire for use in shielding is greater than that of the coated electric wire to be used as a coil wire of the detection coil.

8. The sensor device according to claim 4, wherein the coated electric wire for use in shielding is the same kind of coated electric wire to be used as a coil wire of the detection coil.

9. The sensor device according to claim 1, wherein the sensor device is an photoelectric sensor device including a light receiving element for converting light from a region to be detected into an electric signal; and
a signal relating to the state of the region to be

detected is output based on an output from the light receiving element.

10. The sensor device according to claim 9, wherein the coated electric wire is wound also around the light receiving element in a planar manner.

11. The sensor device according to claim 9 or 10, further comprising:

- a detection circuit board having the detection circuit;

- a cylindrical case; and

- a semi-split cylindrical board holder which supports the detection circuit board and is contained inside of the case;

wherein the coated electric wire is wound around the detection circuit board and the board holder in a planar manner.